**State, ACT, and Common Core Standards Alignment**

Standards to Use for Common Benchmark Assessment Development—Biology (going to put in writing standards when creating lab write-up rubric)

| ***Tennessee Standards*** | **ACT Standards** | **Common Core Standards** | |
| --- | --- | --- | --- |
| |  | | --- | | **SPI 3210 Inq.1** Select a description or scenario that reevaluates and/or extends a scientific finding. | | EM.2 Identify key issues or  assumptions in a model | KID.1 Cite specific textual evidence to support analysis  of science and technical texts, attending to the  precise details of explanations or descriptions.  IKI.9 Compare and contrast findings presented in a text  to those from other sources (including their own  experiments), noting when the findings support or  contradict previous explanations or accounts. |
| |  | | --- | | **SPI 3210 Inq.2** Analyze the components of a properly designed scientific investigation. | | SI.2. Understand a simple  experimental design  SI.3. Identify a control in an  Experiment | KID.3 Follow precisely a complex multistep procedure  when carrying out experiments, taking  measurements, or performing technical tasks,  attending to special cases or exceptions defined  in the text.  CS.6 Analyze the author’s purpose in providing an  explanation, describing a procedure, or discussing  an experiment in a text, defining the question the  author seeks to address. |
| |  | | --- | | **SPI 3210 Inq.3** Determine appropriate tools to gather precise and accurate data. | | SI.1. Understand the methods and  tools used in a moderately  complex experiment |  |
| |  | | --- | | **SPI 3210 Inq.4** Evaluate the accuracy and precision of data. | | I.D.1 Select data from a complex  data presentation (e.g., a table  or graph with more than three  variables; a phase diagram)  I.D.2 Compare or combine data from  a simple data presentation (e.g.,  order or sum data from a table)  SI.4 Identify similarities and  differences between  experiments | IKI.7 Translate quantitative or technical information  expressed in words in a text into visual form  (e.g., a table or chart) and translate information  expressed visually or mathematically (e.g., in an  equation) into words.  IKI.9 Compare and contrast findings presented in a text  to those from other sources (including their own  experiments), noting when the findings support or  contradict previous explanations or accounts.. |
| |  | | --- | | **SPI 3210 Inq.5** Defend a conclusion based on scientific evidence. | | E.M.1Select a simple hypothesis,  prediction, or conclusion  that is supported by a data  presentation or a model | KID.1 Cite specific textual evidence to support analysis  of science and technical texts, attending to the  precise details of explanations or descriptions  KID.3 Analyze in detail a series of events described in  a text; determine whether earlier events caused  later ones or simply preceded them.  IKI.7 Translate quantitative or technical information  expressed in words in a text into visual form  (e.g., a table or chart) and translate information  expressed visually or mathematically (e.g., in an  equation) into words.  IKI.8 Assess the extent to which the reasoning and  evidence in a text support the author’s claim  or a recommendation for solving a scientific or  technical problem. |
| |  | | --- | | **SPI 3210 Inq.6** Determine why a conclusion is free of bias. | | SI.1. Understand the methods and  tools used in a moderately  complex experiment  SI.2 Understand a simple  experimental design | IKI.8 Assess the extent to which the reasoning and  evidence in a text support the author’s claim  or a recommendation for solving a scientific or  technical problem. |
| |  | | --- | | **SPI 3210 Inq.7** Compare conclusions that offer different, but acceptable explanations for the same setoff experimental data | | I.D.1 Select data from a complex  data presentation (e.g., a table  or graph with more than three  variables; a phase diagram)  I.D.2 Compare or combine data from  a simple data presentation (e.g.,  order or sum data from a table)  SI.4 Identify similarities and  differences between  experiments | KID.1 Cite specific textual evidence to support analysis  of science and technical texts, attending to the  precise details of explanations or descriptions  KID.3 Analyze in detail a series of events described in  a text; determine whether earlier events caused  later ones or simply preceded them.  CS.6 Analyze the author’s purpose in providing an  explanation, describing a procedure, or discussing  an experiment in a text, defining the question the  author seeks to address.  IKI.7 Translate quantitative or technical information  expressed in words in a text into visual form  (e.g., a table or chart) and translate information  expressed visually or mathematically (e.g., in an  equation) into words.  IKI.9 Compare and contrast findings presented in a text  to those from other sources (including their own  experiments), noting when the findings support or  contradict previous explanations or accounts. |
| |  | | --- | | **SPI 3210.T/E.1** Distinguish among tools and procedures best suited to conduct a specified scientific inquiry. | | SI.1. Understand the methods and  tools used in a moderately  complex experiment |  |
| |  | | --- | | **SPI 3210.T/E.2** Evaluate a protocol to determine the degree to which an engineering design process was successfully applied. | | SI.2. Understand a simple  experimental design | CS.6 Follow precisely a complex multistep procedure  when carrying out experiments, taking  measurements, or performing technical tasks,  attending to special cases or exceptions defined  in the text.  IKI.7 Translate quantitative or technical information  expressed in words in a text into visual form  (e.g., a table or chart) and translate information  expressed visually or mathematically (e.g., in an  equation) into words. |
| |  | | --- | | **SPI 3210.T/E.3** Evaluate the overall benefit to cost ratio of a new technology. | | ID.2. Compare or combine data from  a simple data presentation (e.g.,  order or sum data from a table)  SI.4 |  |
| |  | | --- | | **SPI 3210.T/E.4** Use design principles to determine how a new technology will improve the quality of life for an intended audience. | | EM.2 Identify key issues or  assumptions in a model |  |
| |  | | --- | | **SPI 3210.Math.1** Interpret a graph that depicts a biological phenomenon. | | ID.1 Select data from a complex  data presentation (e.g., a table  or graph with more than three  variables; a phase diagram)  ID.2 Compare or combine data from  a simple data presentation (e.g.,  order or sum data from a table)  SI.4. Identify similarities and  differences between  experiments  EM.1 Select a simple hypothesis,  prediction, or conclusion  that is supported by a data  presentation or a model | IKI.7 Translate quantitative or technical information  expressed in words in a text into visual form  (e.g., a table or chart) and translate information  expressed visually or mathematically (e.g., in an  equation) into words.  CS.4 Determine the meaning of symbols, key terms,  and other domain-specific words and phrases as  they are used in a specific scientific or technical content relevant to grades 9-10 texts and topics |
| |  | | --- | | **SPI 3210.Math.2** Predict the outcome of a cross between parents of known genotype. | | ID.1 Select data from a complex  data presentation (e.g., a table  or graph with more than three  variables; a phase diagram)  ID.3 Translate information into a  table, graph, or diagram  EM.1 Select a simple hypothesis,  prediction, or conclusion  that is supported by a data  presentation or a model  PSD.3 Determine the probability of a  simple event |  |
| |  | | --- | | **SPI 3210.1.4** Identify positive tests for carbohydrates, lipids, and proteins. | | ID.1 Select data from a complex  data presentation (e.g., a table  or graph with more than three  variables; a phase diagram)  SI.1 Understand the methods and  tools used in a moderately  complex experiment  SI.2 Understand a simple  experimental design |  |
| |  | | --- | | **SPI 3210.3.1** Interpret a diagram that illustrates energy flow in an ecosystem. | | ID.1 Select data from a complex  data presentation (e.g., a table  or graph with more than three  variables; a phase diagram)  EM.1 Select a simple hypothesis,  prediction, or conclusion  that is supported by a data  presentation or a model |  |
| |  | | --- | | **SPI 3210.4.5** Apply pedigree data to interpret various modes of genetic inheritance. | | ID.1 Select data from a complex  data presentation (e.g., a table  or graph with more than three  variables; a phase diagram)  EM.1 Select a simple hypothesis,  prediction, or conclusion  that is supported by a data  presentation or a model | CS.4 Determine the meaning of symbols, key terms,  and other domain-specific words and phrases as  they are used in a specific scientific or technical context relevant to grades 9-10 text and topics |
| |  | | --- | | **SPI 3210.5.6** Infer relatedness among different organisms using modern classification systems. | | ID.1 Select data from a complex  data presentation (e.g., a table  or graph with more than three  variables; a phase diagram)  ID.2 Compare or combine data from  a simple data presentation (e.g.,  order or sum data from a table) | CS.4 Determine the meaning of symbols, key terms,  and other domain-specific words and phrases as  they are used in a specific scientific or technical context relevant to grades 9-10 text and topics |